



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,787	08/28/2003	Rajesh K. Garg	021238-578	5592
21839 7590 11/19/2009 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404				
EXAMINER				
FORTUNA, JOSE A				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
11/19/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary

Application No.

10/649,787

Applicant(s)

GARG ET AL.

Examiner

José A. Fortuna

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Advisory action mailed on June 09, 2009 is vacated and the prosecution of the application is re-opened in view of the Petition's Decision of March 31, 2009. A new Rejection follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(e) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gautam et al., US Patent No. 5,997,691 as further evidenced by MÜNCHOW, US Patent No. 6,214,166, or BLOMQVIST, US Patent No. 3,596,840 or TOMIKAWA et al., US Patent Publication Application 2005/0167534 A1 or Smook in "Handbook for Pulp & Paper Technologist."

Gautam et al. teach a method of making a web in which a base web is moved along a first path, a slurry of cellulosic material is prepared as and add-on to the base web; and repetitive discharging the add-on-material, see for example, paragraph bridging columns 2 and 3. In the same paragraph, Gautam et al. teach that the add-on material is discharged using a moving belt having an orifice along the endless path, same as claim 2 of the current application. Gautam et al. teach also the use of flax straw as the add-on material, see column 12, lines 43-57 and in the same paragraph, Gautam et al. teach that the add-on material is cooked, bleached and then grinded, i.e., refined. The only difference between the claimed invention and Gautam et al. invention is that the way in which the add-on material is ground, i.e., Gautam et al. teach a wet grinding process, while the present application teaches the dry comminution of the add-on materials. However, using either process of grinding is within the levels of ordinary skill in the art, since both of them are very well known in the art. Note that if one desires to do the dry grinding operation, then the steps of pressing and drying the slurry are a necessary and also very well known in the dry market pulp. Wet and dry grinding are functional equivalent processes and it has been held that "[W]here two equivalents are interchangeable for their desired function, substitution would have been obvious and thus, express suggestion of desirability of the substitution of one for the other is

unnecessary.” In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 152 USPQ 618 (CCPA 1967). With regard to claims 4 and 5, the steps of removing shives and contaminants from a pulp is very well known and necessary step(s) after the cooking of the pulp, *see chapter 9 of Smook*.

The following are evidences of the “functionally equivalence” of the dry and wet process for comminuting additives, fibers:

- US Patent No. 6,214,166 to MÜNCHOW, , column 3, lines 5-41 and more specifically, lines 23-25, where they teach that it is customary to use either the wet or dry method for grinding.
- US Patent Application Publication No. 2005/0167534 A1, to TOMIKAWA et al., paragraph [0006], wherein they teach: “Grinding processes include a dry grinding process and a wet grinding process. When a dry product is to be produced by means of a grinding process, in many cases, a dry grinding process, which does not require a drying step, is employed.”
- US Patent No. 3,596,840 to BLOMQVIST, previously cited, teaches in column 1, lines 46-56, some of the advantages of using dry grinding, instead of a wet grinding: “It has now surprisingly been found that cellulose fluff can be advantageously produced starting from pulp in sheet form obtained by conventional methods if the pulp is shredded in dry condition and then, still in dry condition, defibrated in a disk refiner. The use of a disk refiner as disintegrator in the production of fluff according to

the present invention has proved to be very advantageous not only economically but also purely technically because disk refiners deliver a pulp containing only 10-15 percent of fiber bundles which is much lower than in previously known methods in spite of the fact that a harder pressed pulp is used as starting material. Despite the more effective defibration the risk for fiber cutting is not greater than in previously known methods. Further it is surprising that it is possible to treat dry pulp in a disk refiner in which otherwise only wet pulp can be treated. Earlier experiments have namely shown that the pulp is stopped in the refiner if the moisture content falls below a certain value and is burnt so that it sticks to the refiner. The processing of dry, shredded pulp according to the present invention involves certain requirements as to the milling disks of the refiner.”

As to the advantages of the use of the dry comminution, one of ordinary skill in the art would expect the same disclosed results since the prior art teaches the same results, i.e., less energy to produce the same/similar fiber/particle sizes, see for example US Patent No. 3,596,840 to BLOMQVIST.

Response to Arguments

5. Applicant's arguments filed on January 25, 2008 have been fully considered but they are not persuasive.

Applicants argue that the evidentiary references, Blomqvist, Münchow and Tomikawa et al., do not teach the equivalence between the dry and dry comminution process and that they

teach away from the dry comminution. Also presented evidence that teaches why a dry process is not used in the papermaking, i.e. in fibers to make papers. The arguments are not convincing for the following reasons:

- The evidentiary references, all of them, teach that grinding can be done either dry or wet, and therefore, "wet" and "dry" grinding/refining/comminuting are "functionally" equivalent, since they are used for the same purpose/function, i.e. decrease the size of a material. It was also shown that dry grinding as well as wet grinding has been done in the papermaking for liberating fibers, see Blomqvist. The references were only cited to show a specific teaching, i.e. wet and dry are functionally equivalent, not that Blomqvist shows that other steps after the grinding, i.e. slurring the dried fibers. Note that in recent court decisions, KSR; it has been held that it is obvious to try, choosing from a finite number of identified, predictable solutions. Also KSR forecloses the arguments that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See recent Board decision *Ex parte Smith*, --USPQ2d--, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (Citing KSR, 82 USPQ2d at 1396).
- As to applicants' arguments that the prior art teaches away from refining cellulosic fibers in the dry state, citing several references, which teach that the bleaching and other operations of the pulp and papermaking operation are affected by the refining of the pulp for making paper. While this may be true, the fibers of the present invention are not been used to make the base paper, *but as an additive*, i.e. and add-on and therefore, the one of ordinary skill in

the art would not need to be concerned with the same variables, i.e. fibrillation, generation of radicals and plasticizers, the variables discussed by applicants in Paragraph 6. Actually, applicants own arguments answer the question of obviousness in the use of the dry or wet comminution for this particular case, see paragraph 6, where applicants states:

- *Finely ground or fragmented celluloses are well known. These products are produced by mechanical comminution or grinding of dried, refined cellulose. They are employed largely as inert, non-mineral fillers in processed foods and plastics.*

This clearly is the case for the current application; the fibers are used as additives, not as the papermaking fibers. Moreover as indicated above Blomqvist teaches that refining could be done by dry or wet method.

- In conclusion, one of ordinary skill in the art would find obvious to use either “dry” or “wet” refining of the fibers as additives since they are known “functionally” equivalent for the reasons shown above. It has been held that it obvious to try, choosing from a finite number of identified, predictable solutions. Also KSR forecloses the arguments that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See recent Board decision *Ex parte Smith*, —USPQ2d—, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (Citing KSR, 82 USPQ2d at 1396).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/José A Fortuna/
Primary Examiner
Art Unit 1791

JAF